

78206

3-612

217967

STIC-Biotech/ChemLib CRFD

From: Chan, Christina  
Sent: Monday, March 12, 2007 11:41 AM  
To: Li, Bao-Qun; STIC-Biotech/ChemLib  
Subject: RE: 10789355

RECEIVED  
MAR 12 2007  
11:41 AM

Please rush. Thanks Chris

3C18

Chris Chan  
TC 1600 New Hire Training Coordinator and SPE 1644  
(571)-272-0841  
Remsen, 3E89

-----Original Message-----

From: Li, Bao-Qun  
Sent: Monday, March 12, 2007 9:13 AM  
To: Chan, Christina; STIC-Biotech/ChemLib  
Subject: 10789355

Please prove the rush order of alignment analysis of SEQ ID NO: 5 with SEQ ID NO: 2, 4, 6, 7, and 25.  
Thank you.

Bao Qun Li M.D  
TC 1600  
Art Unit 1648  
Tel. 517-272-0904  
REM, 3C18  
Rm. 3D24

2 Na 8642  
4 Na 8643  
6 Na 8638  
7 Na 8638  
25 Na 8638

119

mg

3/12/2007

Qy	5822	GGGCTCAATCAATACCTGTTGGGTACAGCTCCCATCGAGCCGAAACGGACGTAGCA	5881
Db	5822	GGGCTCAATCAATACCGGTTGGGTACAGCTCCCATCGAGCCGAACTGACGTAGCA	5881
Qy	5882	GTGCTCACTCCATGCTCACCGACCCCTCCACATTACGGCGGAGACGGCTTAAGCGTAGG	5941
Db	5882	GTGCTCACTTCCATGCTCACCGACCCCTCCACATTACGGCGGAGACGGCTTAAGCGTAGG	5941
Qy	5942	CTGGCCAGGGGATCTCCCCCTCTTTGGCCAGCTCATCAGCTACGCCAGCTGTCTGGCCCC	6001
Db	5942	CTGGCCAGGGGATCTCCCCCTCTTTGGCCAGCTCATCAGCTACGCCAGCTGTCTGGCCCT	6001
Qy	6002	TCCTTGAAGGCAACATGCACTACCCGTATGACTCCCGGAGCGTGACTCATCTCGAGGCC	6061
Db	6002	TCCTTGAAGGCAACATGCACTACCCGTATGACTCCCGGAGCGTGACTCATCTCGAGGCC	6061
Qy	6062	AACCTCTGTGGCGGACAGGATGGGCGGGAACATCACCCGCTGGAGTCAGAAATAAG	6121
Db	6062	AACCTCTGTGGCGGACAGGATGGGCGGGAACATCACCCGCTGGAGTCAGAAATAAG	6121
Qy	6122	GTAGTAATTTTGGACTCTTTTCGAGCCGCTCCAAAGCGGAGGATGAGAGGGAAGTATCC	6181
Db	6122	GTAGTAATTTTGGACTCTTTTCGAGCCGCTCCAAAGCGGAGGATGAGAGGGAAGTATCC	6181
Qy	6182	GTTCGCGCGGAGATCTCTCGGAGGTCTCAGGAAATTTCCCTCGAGCGATGCCCATATGGGCA	6241
Db	6182	GTTCGCGCGGAGATCTCTCGGAGGTCTCAGGAAATTTCCCTCGAGCGATGCCCATATGGGCA	6241
Qy	6242	CGCCCGGATTACAACCCCTCACTGTTAGAGTCTTGGAAGNACCCGGACTACGTCCCTCCA	6301
Db	6242	CGCCCGGATTACAACCCCTCACTGTTAGAGTCTTGGAAGNACCCGGACTACGTCCCTCCA	6301
Qy	6302	GTGGTACACGGGTGTCAATTTGCCCTGTCGAAGGCCCTCCGATACCACTCTCACGGAGG	6361
Db	6302	GTGGTACACGGGTGTCAATTTGCCCTGTCGAAGGCCCTCCGATACCACTCTCACGGAGG	6361
Qy	6362	AAGAGGACGTTGCTGTCTCAGAAATCTACCGTGCTTTCTGCTTTGGCGGAGCTCGCCACA	6421
Db	6362	AAGAGGACGTTGCTGTCTCAGAAATCTACCGTGCTTTCTGCTTTGGCGGAGCTCGCCACA	6421
Qy	6422	AAGACCTTCGCGACGCTCGGAATCTCTGGCCGTTCGACAGCGGCACGGCAACGGCTCTCCT	6481
Db	6422	AAGACCTTCGCGACGCTCGGAATCTCTGGCCGTTCGACAGCGGCACGGCAACGGCTCTCCT	6481
Qy	6482	GACCAGCCCTCCGACAGCGGCGACGGGATCCGACGTTGAGTCGTACTCTCTCATGCCCC	6541
Db	6482	GACCAGCCCTCCGACAGCGGCGACGGGATCCGACGTTGAGTCGTACTCTCTCATGCCCC	6541
Qy	6542	CCCCTTGAGGGGAGCGCGGGGATCCCGATCTCAGCGACGGGCTTGGTCTACCGTAAGC	6601
Db	6542	CCCCTTGAGGGGAGCGCGGGGATCCCGATCTCAGCGACGGGCTTGGTCTACCGTAAGC	6601
Qy	6602	GAGAGGCTAGTAGGACGTCGTCTGCTGTGATGTCCTACATGGAAGGCGGCCCTG	6661
Db	6602	GAGAGGCTAGTAGGACGTCGTCTGCTGTGATGTCCTACATGGAAGGCGGCCCTG	6661
Qy	6662	ATCAGCGCATCGCTGCGGAGGAAACAAAGCTGCCCATCAATGACCTGAGCAACTCTTTG	6721
Db	6662	ATCAGCGCATCGCTGCGGAGGAAACAAAGCTGCCCATCAATGACCTGAGCAACTCTTTG	6721
Qy	6722	CTCCGTCACCAAACTTTGGTCTATGCTACAAATCTCGACGCGCAAGCCTCGCGCAGAAG	6781
Db	6722	CTCCGTCACCAAACTTTGGTCTATGCTACAAATCTCGACGCGCAAGCCTCGCGCAGAAG	6781
Qy	6782	AAGTTCACCTTTGACAGACTCGAGTCTTGACAGACCACTACCCGGACGTGCTCAAGGAG	6841
Db	6782	AAGTTCACCTTTGACAGACTCGAGTCTTGACAGACCACTACCCGGACGTGCTCAAGGAG	6841
Qy	6842	ATGAAGGCGAAGGGCGTCCACAGTTTAAAGCTAAATCTTATCCGTGGAGGAAGCCTGTAAG	6901
Db	6842	ATGAAGGCGAAGGGCGTCCACAGTTTAAAGCTAAATCTTATCCGTGGAGGAAGCCTGTAAG	6901
Qy	6902	CTGACGCCCCCAATTCGGCCAGATCTAAATTTGGCTATGGGGCAAGGACGTCCGGAAC	6961

6902																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
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Db 7982 TGTACTCCATTGAGCCACTTGACCTACCTCAGATCATTTCAACGACTCCACGGCCTTAGC 8041  
Qy 8042 GCATTTTCACTCCATAGTTACTCTCCAGGTGAGATCAATAGGGTGGCTTCAATCCTCAGG 8101  
Db 8042 GCATTTTCACTCCATAGTTACTCTCCAGGTGAGATCAATAGGGTGGCTTCAATCCTCAGG 8101  
Qy 8102 AAATCTGGGTACCGCCCTTGGAGTCTGGAGACATCGGCCAGAAAGTGTCCGCGCTAGG 8161  
Db 8102 AAATCTGGGTACCGCCCTTGGAGTCTGGAGACATCGGCCAGAAAGTGTCCGCGCTAGG 8161  
Qy 8162 CTACTGTCCAGGGGGAGGGCTGCGACTTTGTGGCAAGTACCTCTTCAACTGGGAGTA 8221  
Db 8162 CTACTGTCCAGGGGGAGGGCTGCGACTTTGTGGCAAGTACCTCTTCAACTGGGAGTA 8221  
Qy 8222 AGACCAAGCTCAAACTCACTCCAAATCCCGGCTGGCTCCAGTTGGATTATCCAGCTGG 8281  
Db 8222 AGACCAAGCTCAAACTCACTCCAAATCCCGGCTGGCTCCAGTTGGATTATCCAGCTGG 8281  
Qy 8282 TTCTGTCTGTTACAGCGGGGAGACATATATACAGCCCTGTCTGTGCCCCGACCCCGC 8341  
Db 8282 TTCTGTCTGTTACAGCGGGGAGACATATATACAGCCCTGTCTGTGCCCCGACCCCGC 8341  
Qy 8342 TGGTTCACTGGTGGCTTACTCTTCTGTAGGGTAGGCATCTATCTACTCTCCCAAC 8401  
Db 8342 TGGTTCACTGGTGGCTTACTCTTCTGTAGGGTAGGCATCTATCTACTCTCCCAAC 8401  
Qy 8402 CGATGAACGGGAGCTAAACACTCCAGGCCAATAGGCCATCTCTTTTCCCTTTT 8461  
Db 8402 CGATGAACGGGAGCTAAACACTCCAGGCCAATAGGCCATCTCTTTTCCCTTTT 8461  
Qy 8462 CCCTTT 8521  
Db 8462 CCCTTT 8521  
Qy 8522 TCCCTTT 8581  
Db 8522 TCCCTTT 8581  
Qy 8582 GCTGTGAAGGTCGGTAGCGCTTGACTGACAGAGTGTGATAGTGGCTCTCTGCAG 8641  
Db 8582 GCTGTGAAGGTCGGTAGCGCTTGACTGACAGAGTGTGATAGTGGCTCTCTGCAG 8641  
Qy 8642 ATCAAGT 8648  
Db 8642 ATCAAGT 8638

RESULT 6  
US-10-789-355-6/c  
; Sequence 6, Application US/10789355  
; GENERAL INFORMATION:  
; APPLICANT: BOEHRINGER INGELHEIM (CANADA) LTD.  
; TITLE OF INVENTION: SELF REPLICATING RNA MOLECULE FROM  
; FILE REFERENCE: 13/083  
; CURRENT APPLICATION NUMBER: US/10/789,355  
; PRIOR FILING DATE: 2004-02-27  
; PRIOR APPLICATION NUMBER: US/10/029,907  
; PRIOR FILING DATE: 2001-12-21  
; PRIOR APPLICATION NUMBER: 60/257,857  
; NUMBER OF SEQ ID NOS: 25  
; SOFTWARE: FastSeq for Windows Version 4.0  
; SEQ ID NO 6  
; LENGTH: 8638  
; TYPE: DNA  
; ORGANISM: HCV  
; FEATURE:  
; NAME/KEY: CDS  
; LOCATION: (1802)...(8407)  
US-10-789-355-6

Query Match 0.4%; Score 33.4; DB 1; Length 8638;  
Best Local Similarity 49.2%; Pred. No. 0;  
Matches 88; Conservative 0; Mismatches 91; Indels 0; Gaps 0;

Best Local Similarity 49.2%; Pred. No. 0;  
Matches 88; Conservative 0; Mismatches 91; Indels 0; Gaps 0;

Qy 6120 AGGTAGTAATTTTGGACTCTTTTCGAGCCGCTCCAAAGCGGAGGAGTGAAGGGAAGTAT 6179  
Db 6298 AGGGACGTAGTCCGGGTCTCTCCAGGACTCTAACAGTGGAGGGTTGTAATCCGGCGTGC 6239  
Qy 6180 CCGTTCCGGCGGAGATCCTGGGAGGTCCAGGAAATTCCTCGAGCGATGCCCATATGGG 6239  
Db 6238 CCATATGGGCATCGCTCAGGGAATTTCTGGACCTCCGAGGATCTCCGCCGGAACGA 6179  
Qy 6240 CACGCCCGGAGTTACAACTCCACTGTTAGAGTCTCTGGAAGGACCCGGACTACGTCCT 6298  
Db 6178 TACTTCCCTCTCATCTCTCTCGCTTGGAGCGGCTCGAAAGAGTCCAAAATTAATACCT 6120

RESULT 7  
US-10-789-355-7/c  
; Sequence 7, Application US/10789355  
; GENERAL INFORMATION:  
; APPLICANT: BOEHRINGER INGELHEIM (CANADA) LTD.  
; TITLE OF INVENTION: SELF REPLICATING RNA MOLECULE FROM  
; FILE REFERENCE: 13/083  
; CURRENT APPLICATION NUMBER: US/10/789,355  
; PRIOR FILING DATE: 2004-02-27  
; PRIOR APPLICATION NUMBER: US/10/029,907  
; PRIOR FILING DATE: 2001-12-21  
; PRIOR APPLICATION NUMBER: 60/257,857  
; NUMBER OF SEQ ID NOS: 25  
; SOFTWARE: FastSeq for Windows Version 4.0  
; SEQ ID NO 7  
; LENGTH: 8638  
; TYPE: DNA  
; ORGANISM: HCV  
; FEATURE:  
; NAME/KEY: CDS  
; LOCATION: (1802)...(8407)  
US-10-789-355-7

Query Match 0.4%; Score 33.4; DB 1; Length 8638;  
Best Local Similarity 49.2%; Pred. No. 0;  
Matches 88; Conservative 0; Mismatches 91; Indels 0; Gaps 0;

Qy 6120 AGGTAGTAATTTTGGACTCTTTTCGAGCCGCTCCAAAGCGGAGGAGTGAAGGGAAGTAT 6179  
Db 6298 AGGGACGTAGTCCGGGTCTCTCCAGGACTCTAACAGTGGAGGGTTGTAATCCGGCGTGC 6239  
Qy 6180 CCGTTCCGGCGGAGATCCTGGGAGGTCCAGGAAATTCCTCGAGCGATGCCCATATGGG 6239  
Db 6238 CCATATGGGCATCGCTCAGGGAATTTCTGGACCTCCGAGGATCTCCGCCGGAACGA 6179  
Qy 6240 CACGCCCGGAGTTACAACTCCACTGTTAGAGTCTCTGGAAGGACCCGGACTACGTCCT 6298  
Db 6178 TACTTCCCTCTCATCTCTCTCGCTTGGAGCGGCTCGAAAGAGTCCAAAATTAATACCT 6120

RESULT 8  
US-10-789-355-25/c  
; Sequence 25, Application US/10789355  
; GENERAL INFORMATION:  
; APPLICANT: BOEHRINGER INGELHEIM (CANADA) LTD.  
; TITLE OF INVENTION: SELF REPLICATING RNA MOLECULE FROM  
; FILE REFERENCE: 13/083  
; CURRENT APPLICATION NUMBER: US/10/789,355  
; PRIOR FILING DATE: 2004-02-27  
; PRIOR APPLICATION NUMBER: US/10/029,907  
; PRIOR FILING DATE: 2001-12-21  
; PRIOR APPLICATION NUMBER: 60/257,857  
; NUMBER OF SEQ ID NOS: 25  
; SOFTWARE: FastSeq for Windows Version 4.0  
; SEQ ID NO 8  
; LENGTH: 8638  
; TYPE: DNA  
; ORGANISM: HCV  
; FEATURE:  
; NAME/KEY: CDS  
; LOCATION: (1802)...(8407)  
US-10-789-355-25

Query Match 0.4%; Score 33.4; DB 1; Length 8638;  
Best Local Similarity 49.2%; Pred. No. 0;  
Matches 88; Conservative 0; Mismatches 91; Indels 0; Gaps 0;

SOFTWARE: FastSEQ for Windows Version 4.0

SEQ ID NO 25

LENGTH: 8638

TYPE: DNA

ORGANISM: HCV

FEATURE:

NAME/KEY: CDS

LOCATION: (1802)...(8407)

US-10-789-355-25

Query Match 0.4%; Score 33.4; DB 1; Length 8638;

Best Local Similarity 49.2%; Pred. No. 0;

Matches 88; Conservative 0; Mismatches 91; Indels 0; Gaps 0;

QY 6120 AGGTAGTAATTTGGACTCTTTCCGAGCGCTCCAAAGCGGAGGAGATGAGAGGAAGTAT 6179

Db 6298 AGGACGTAGTCCGGTCTTCCAGGACTTAAACAGTGGAGGGTTGTAATCCGGCGTGC 6239

QY 6180 CCGTTCGGCGGAGATCCTCGGAGGTCAGGAAATTCCTCGAGCGATGCCCATATGGG 6239

Db 6238 CCATATGGCATCGCTCGAGGAATTTCTGGACCTCCGAGGATCTCCCGCGAACGGA 6179

QY 6240 CAGCCCGGATTAAACCTCCACTGTAGATCTCGAAGGACCCGGACTACGTCCCT 6298

Db 6178 TACTTCCTCTCATCTCTCTCCGCTTGAGCGGCTCGAAAGAGTCCAAATTTACTACCT 6120

#### RESULT 9

US-10-789-355-2/c

Sequence 2, Application US/10789355

GENERAL INFORMATION:

APPLICANT: BOEHRINGER INGELHEIM (CANADA) LTD.

TITLE OF INVENTION: SELF REPLICATING RNA MOLECULE FROM

TITLE OF INVENTION: HEPATITIS C VIRUS

FILE REFERENCE: 13/083

CURRENT APPLICATION NUMBER: US/10/789,355

CURRENT FILING DATE: 2004-02-27

PRIOR APPLICATION NUMBER: US/10/029,907

PRIOR FILING DATE: 2001-12-21

PRIOR APPLICATION NUMBER: 60/257,857

PRIOR FILING DATE: 2000-12-22

NUMBER OF SEQ ID NOS: 25

SOFTWARE: FastSEQ for Windows Version 4.0

SEQ ID NO 2

LENGTH: 8642

TYPE: DNA

ORGANISM: HCV

FEATURE:

NAME/KEY: CDS

LOCATION: (1802)...(8407)

FEATURE:

NAME/KEY: variation

LOCATION: 6268

OTHER INFORMATION: r = a or g

FEATURE:

NAME/KEY: variation

LOCATION: 4446

OTHER INFORMATION: r = a or g

US-10-789-355-2

Query Match

Best Local Similarity 0.4%; Score 33; DB 1; Length 8642;

Matches 87; Conservative 1; Mismatches 91; Indels 0; Gaps 0;

QY 6120 AGGTAGTAATTTGGACTCTTTCCGAGCGCTCCAAAGCGGAGGAGATGAGAGGAAGTAT 6179

Db 6298 AGGACGTAGTCCGGTCTTCCAGGACTCYAACAGTGGAGGGTTGTAATCCGGCGTGC 6239

QY 6180 CCGTTCGGCGGAGATCCTCGGAGGTCAGGAAATTCCTCGAGCGATGCCCATATGGG 6239

Db 6238 CCATATGGGCATCGCTCGAGGAATTTCTGGACCTCCGAGGATCTCCCGCGAACGGA 6179

QY 6240 CAGCCCGGATTAAACCTCTCAGTGTAGATCTCGAAGGACCCGGACTACGTCCCT 6298

Db 6178 TACTTCCTCTCATCTCTCTCCGCTTGAGCGGCTCGAAAGAGTCCAAATTTACTACCT 6120

#### RESULT 10

US-10-789-355-4/c

Sequence 4, Application US/10789355

GENERAL INFORMATION:

APPLICANT: BOEHRINGER INGELHEIM (CANADA) LTD.

TITLE OF INVENTION: SELF REPLICATING RNA MOLECULE FROM

TITLE OF INVENTION: HEPATITIS C VIRUS

FILE REFERENCE: 13/083

CURRENT APPLICATION NUMBER: US/10/789,355

CURRENT FILING DATE: 2004-02-27

PRIOR APPLICATION NUMBER: US/10/029,907

PRIOR FILING DATE: 2001-12-21

PRIOR APPLICATION NUMBER: 60/257,857

PRIOR FILING DATE: 2000-12-22

NUMBER OF SEQ ID NOS: 25

SOFTWARE: FastSEQ for Windows Version 4.0

SEQ ID NO 4

LENGTH: 8643

TYPE: DNA

ORGANISM: HCV

FEATURE:

NAME/KEY: CDS

LOCATION: (1802)...(8407)

US-10-789-355-4

Query Match

Best Local Similarity 0.4%; Score 31.8; DB 1; Length 8643;

Matches 48; Conservative 0; Mismatches 27; Indels 0; Gaps 0;

QY 858 CTGGAGCAAGAGCATCAGGGGCTCGCGCCAGCCGAACTGTTCCCGAGGCTCAAGGCGGC 917

Db 932 CTGCGGTGCGGCATGCGGCCCTTGAGCCTGGCGAACAGTTGCGTGGCGGAGCCCTG 873

QY 918 ATGCCCCGACGGCGAG 932

Db 872 ATGCTCTTCGTCAG 858

Search completed: March 13, 2007, 16:16:47

Job time : 56 secs

GenCore version 6.2  
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OM nucleic - nucleic search, using sw model

Run on: March 13, 2007, 16:15:50 ; Search time 45 Seconds  
(without alignments)  
16.604 Million cell updates/sec

Title: US-10-789-355-5  
Perfect score: 8648  
Sequence: 1 gccagcccgattgggggc.....ggcctctgcagatcaagt 8648

Scoring table: IDENTITY\_NUC  
Gapop 10.0 , Gapext 0.5  
Searched: 5 seqs, 43199 residues

Total number of hits satisfying chosen parameters: 10

Minimum DB seq length: 0  
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%  
Maximum Match 100%  
Listing first 200 summaries

Database : US10789355seqdb:\*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	ID	Description
1	8603.2	99.5	8642	1 US-10-789-355-2	Sequence 2, Appli
2	8591.6	99.3	8638	1 US-10-789-355-6	Sequence 6, Appli
3	8584.7	99.3	8643	1 US-10-789-355-4	Sequence 4, Appli
4	8578.2	99.2	8638	1 US-10-789-355-7	Sequence 7, Appli
5	8577.2	99.2	8638	1 US-10-789-355-25	Sequence 25, Appli
C 6	33.4	0.4	8638	1 US-10-789-355-6	Sequence 6, Appli
C 7	33.4	0.4	8638	1 US-10-789-355-7	Sequence 7, Appli
C 8	33.4	0.4	8638	1 US-10-789-355-25	Sequence 25, Appli
C 9	33	0.4	8642	1 US-10-789-355-2	Sequence 2, Appli
C 10	31.8	0.4	8643	1 US-10-789-355-4	Sequence 4, Appli

ALIGNMENTS

RESULT 1  
US-10-789-355-2  
; Sequence 2, Application US/10789355  
; GENERAL INFORMATION:  
; APPLICANT: BOHRINGER INGELHEIM (CANADA) LTD.  
; TITLE OF INVENTION: SELF REPLICATING RNA MOLECULE FROM  
; TITLE OF INVENTION: HEPATITIS C VIRUS  
; FILE REFERENCE: 13/083  
; CURRENT APPLICATION NUMBER: US/10/789, 355  
; CURRENT FILING DATE: 2004-02-27  
; PRIOR APPLICATION NUMBER: US/10/029, 907  
; PRIOR FILING DATE: 2001-12-21  
; PRIOR APPLICATION NUMBER: 60/257, 857  
; PRIOR FILING DATE: 2000-12-22  
; NUMBER OF SEQ ID NOS: 25  
; SOFTWARE: FastSeq for Windows Version 4.0  
; SEQ ID NO 2  
; LENGTH: 8642

TYPE: DNA  
ORGANISM: HCV  
FEATURE:  
NAME/KEY: CDS  
LOCATION: (1802)...(8407)  
FEATURE:  
NAME/KEY: variation  
LOCATION: 6268  
OTHER INFORMATION: r = a or g  
FEATURE:  
NAME/KEY: variation  
LOCATION: 4446  
OTHER INFORMATION: r = a or g  
US-10-789-355-2

Query Match 99.5%; Score 8603.2; DB 1; Length 8642;  
Best Local Similarity 99.7%; Pred. No. 0;  
Matches 8624; Conservative 2; Mismatches 15; Indels 6; Gaps 1;  
  
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QY 1922 ATCACAGGCGGAGGACACCTTGCAGAGTGTGATCCCCCCCCCTCAACGTTGGGGGGG 1981  
DB |||||  
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QY 1982 CGCATGCGGTCACTCTCTCACGTGGCGCATCCACAGAGCTAACTTTTACCATACC 2041  
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QY 2042 AAAATCTTGTTCGCCATCTCGTTCCTCACGTGGCGCATCCACAGAGCTAACTTTTACCATACC 2101  
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QY 2102 CCGTACTTCGTCGCGGACACGCGGCTCATTCGTGCATGCTGTTGGTGGGAGGTTGCT 2161  
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QY 2162 GGGGCTCATTTATGTCCAAATGGCTCTCATGAAGTTGGCGCATGACAGGTACGTACGTT 2221  
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QY 2162 GGGGCTCATTTATGTCCAAATGGCTCTCATGAAGTTGGCGCATGACAGGTACGTACGTT 2221  
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QY 2222 TATGACCATCTCAACCCATCTCGGGAATGGGCCCAACGCGGCTTACGAGACCTTGGCGGTG 2281  
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QY 2282 GCAGTTGAGCCCGTCTCTCTGATATGAGACCAAGGTTTACCTTGGGGGCGAGAC 2341  
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QY 2522 CGGACAGGAACCGAGTTCGAGGGGAGGTCCAAGTGTCTCCACCGCAACAATCTTTTC 2581  
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DB |||||

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DB	4802	AACATCTGGGGGATGGGTGGCGCCCAACTTGTCTCTCCAGCGCTGCTTCTGCTTTC	4861	QY	5942	CTGGCAGGGGATCTCCCCCTCTTGGCCAGCTCATCAGCTAGCCAGCTGTCTCCGCC	6001
QY	4862	GTAGGCGCGGCATCGCTGAGCGGCTGTGTGGCAGCATAGGCTTGGGAAGTGTCTGTG	4921	DB	5942	CTGGCAGGGGATCTCCCCCTCTTGGCCAGCTCATCAGCTAGCCAGCTGTCTCCGCC	6001
DB	4862	GTAGGCGCGGCATCGCTGAGCGGCTGTGTGGCAGCATAGGCTTGGGAAGTGTCTGTG	4921	QY	6002	TCCCTTGAAGGCAACATGACTACCCCTCATGACTCCCCCGGACGCTGACCTCATCAGAGCC	6061
QY	4922	GATATTTTGGCAGGTTATGGACAGGGGTGGCAGGCGCTCGTGGCCCTTAAAGTCAAG	4981	DB	6002	TCCCTTGAAGGCAACATGACTACCCCTCATGACTCCCCCGGACGCTGACCTCATCAGAGCC	6061
DB	4922	GATATTTTGGCAGGTTATGGACAGGGGTGGCAGGCGCTCGTGGCCCTTAAAGTCAAG	4981	QY	6062	AACCTCTGTGGCGGAGGAGATGGCGGGAAATCATCACCCTGGTGGAGTCAAGAAATAG	6121
QY	4982	AGCGGAGATGCTCCACCGAGGACCTGGTTAACTACTCTCTCTATCTCTCTCTCTCT	5041	DB	6062	AACCTCTGTGGCGGAGGAGATGGCGGGAAATCATCACCCTGGTGGAGTCAAGAAATAG	6121
DB	4982	AGCGGAGATGCTCCACCGAGGACCTGGTTAACTACTCTCTCTATCTCTCTCTCTCT	5041	QY	6122	GTAGTAAATTTTGGACTCTTTTCGAGCGCTCCAAAGCGGAGGAGATGAGAGGAAATATCC	6181
QY	5042	GGCGCCCTAGTCTCGGGGTCTGTGCGCAGCGATATCTGCTGGCGCACTGGGGCCAGGG	5101	DB	6122	GTAGTAAATTTTGGACTCTTTTCGAGCGCTCCAAAGCGGAGGAGATGAGAGGAAATATCC	6181
DB	5042	GGCGCCCTAGTCTCGGGGTCTGTGCGCAGCGATATCTGCTGGCGCACTGGGGCCAGGG	5101	QY	6182	GTTCGGCGGAGATCTCTCGGAGGTCCAGGAAATTTCCCTCGAGCGATGCCCATATGGCA	6241
QY	5102	GAGGGGCTGTGAGTGGATGAACCGGCTGATAGCGTTGCTTCGCGGGGTAAACCACTGC	5161	DB	6182	GTTCGGCGGAGATCTCTCGGAGGTCCAGGAAATTTCCCTCGAGCGATGCCCATATGGCA	6241
DB	5102	GAGGGGCTGTGAGTGGATGAACCGGCTGATAGCGTTGCTTCGCGGGGTAAACCACTGC	5161	QY	6242	CGCCCGGATTAAACCCCTCCACTGTAGAGTCTTGGAAGGACCCCGGACTACGTCCTCCA	6301
QY	5162	TCCCCCAGCAGTATGCTGAGAGCGAGCTGACAGCGTGTCACTCAGATCTCTCTCT	5221	DB	6242	CGCCCGGATTAAACCCCTCCACTGTAGAGTCTTGGAAGGACCCCGGACTACGTCCTCCA	6301
DB	5162	TCCCCCAGCAGTATGCTGAGAGCGAGCTGACAGCGTGTCACTCAGATCTCTCTCT	5221	QY	6302	GTGGTACAGGGGTGTCATTCGCCCTCCAGGCCCCCTCCGATACCACTCCACGGAGG	6361
QY	5222	AGTCTTACCATCACTCAGCTGTCTGAAGAGGCTTCCACAGTGGATCAACAGGACTGCTCC	5281	DB	6302	GTGGTACAGGGGTGTCATTCGCCCTCCAGGCCCCCTCCGATACCACTCCACGGAGG	6361
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QY	5282	ACGCCATGCTCGGCTGCTGAGATGAAGAGATGTTTGGGATTTGATATGACGSGTGTGACT	5341	DB	6362	AAGAGGACGGTGTCTCTCAGAAATCTACCGTGTCTTTCGCTTGGCGGAGCTGCCACA	6421
DB	5282	ACGCCATGCTCGGCTGCTGAGATGAAGAGATGTTTGGGATTTGATATGACGSGTGTGACT	5341	QY	6422	AAGACCTTTCGGCAGCTCCGAATTCGTGGCGCTGCGACAGGGCACCGGCAACCGCTCTCT	6481
QY	5342	GATTTCAAGACCTGGCTCCAGTCCAAAGCTCTCCCGCGATGTCGGGGAGTCCCTTCTTC	5401	DB	6422	AAGACCTTTCGGCAGCTCCGAATTCGTGGCGCTGCGACAGGGCACCGGCAACCGCTCTCT	6481
DB	5342	GATTTCAAGACCTGGCTCCAGTCCAAAGCTCTCCCGCGATGTCGGGGAGTCCCTTCTTC	5401	QY	6482	GACCAAGCTTCGACGAGCGGACCGGGGATCCGACGTTGAGTCTGCTCTCCATGCCC	6541
QY	5402	TCATGTCAACGCTGGGTACAGGAGGCTGTGGCGGGCGACGGCATCATGCAAAACCACTGC	5461	DB	6482	GACCAAGCTTCGACGAGCGGACCGGGGATCCGACGTTGAGTCTGCTCTCCATGCCC	6541
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QY	5462	CCATGTGGAGCA CAGATCAACCGGACATGTGAAAAAATGTTTCCATGAGGATCGTGGGCT	5521	DB	6542	CCCTTTGAGGGGAGCGCGGGGATCCCGATCTCAGCGACGGGCCCTTGGTCTACCGTAAGC	6601
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QY	5522	AGGACCTGTAGTAACACGCTGGCATGGAACATTCCTCCATTAACCGCTAGACACGGGCCCC	5581	DB	6602	GAGGAGGCTAGTGAGGAGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTG	6661
DB	5522	AGGACCTGTAGTAACACGCTGGCATGGAACATTCCTCCATTAACCGCTAGACACGGGCCCC	5581	QY	6662	ATCAGCCCATGCGCTGGGAGGAAACCAAGCTGCCCATCAATGCACTGAGCAACTCTTTTG	6721
QY	5582	TGCAAGCCCTCCCGCGCGCAAAATTTATTCAGGGCGCTGTGGCGGGTGGCTGTGAGGAG	5641	DB	6662	ATCAGCCCATGCGCTGGGAGGAAACCAAGCTGCCCATCAATGCACTGAGCAACTCTTTTG	6721
DB	5582	TGCAAGCCCTCCCGCGCGCAAAATTTATTCAGGGCGCTGTGGCGGGTGGCTGTGAGGAG	5641	QY	6722	CTCCGTACCAACAACTTGGTCTATGCTACAAATCTCGCAGCGCAAGCTCGCGGCAAGAG	6781
QY	5642	TACGTGGAGGTTACGCGGCTGGGGATTTTCACTAGCGGCGATGACCACTGACCAAC	5701	DB	6722	CTCCGTACCAACAACTTGGTCTATGCTACAAATCTCGCAGCGCAAGCTCGCGGCAAGAG	6781
DB	5642	TACGTGGAGGTTACGCGGCTGGGGATTTTCACTAGCGGCGATGACCACTGACCAAC	5701	QY	6782	AAGGTCACTTTTGCAGACTGCGAGTCTGAGCGACCACTACCGGAGCGTGTCAAGGAG	6841
QY	5702	GTAAAGTGGCGGTGTCAGGTTCCGGCCCCCGAATTTCTTACAGAGTGGATGGGTGCGG	5761	DB	6782	AAGGTCACTTTTGCAGACTGCGAGTCTGAGCGACCACTACCGGAGCGTGTCAAGGAG	6841
DB	5702	GTAAAGTGGCGGTGTCAGGTTCCGGCCCCCGAATTTCTTACAGAGTGGATGGGTGCGG	5761	QY	6842	ATGAAGGCGAAGCGCTCCACAGTTAAGCTAACTTCTATTCGTTGAGGAGGCTCTTAAG	6901
QY	5762	TTGCACAGGTACGCTCCAGCGTGCACACCCCTCTCTACGGGAGGAGTCACTTCTGGTC	5821	DB	6842	ATGAAGGCGAAGCGCTCCACAGTTAAGCTAACTTCTATTCGTTGAGGAGGCTCTTAAG	6901
DB	5762	TTGCACAGGTACGCTCCAGCGTGCACACCCCTCTCTACGGGAGGAGTCACTTCTGGTC	5821	QY	6902	CTGAGCGCCCCACATTTCCGCCAGATCTAAATTTGGCTATGGGCAAGGACGTCGCGAAC	6961
QY	5822	GGGCTCAATCAATCTGTTGGGTCAAGCTCCCATGCGAGCCCGAAACCGGACGTAGCA	5881	DB	6902	CTGAGCGCCCCACATTTCCGCCAGATCTAAATTTGGCTATGGGCAAGGACGTCGCGAAC	6961
DB	5822	GGGCTCAATCAATCTGTTGGGTCAAGCTCCCATGCGAGCCCGAAACCGGACGTAGCA	5881	QY	6962	CTATCCAGCAAGGCGCTTAAACCACTCCGCTCCGTTGGAAGGACTTGTGTGAAGACACT	7021
QY	5882	GTGCTCACTTCCATGCTCAACCGACCCCTCCCAATTAACGGCGGAGACGGCTAAGCGTAGG	5941				

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Db 8512 TTCTCTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTT 8571
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Qy 8642 ATCAAGT 8648
Db 8632 ATCAAGT 8638
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## RESULT 3

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US-10-789-355-4
; Sequence 4, Application US/10789355
; GENERAL INFORMATION:
; APPLICANT: BOEHRINGER INGELHEIM (CANADA) LTD.
; TITLE OF INVENTION: SELF REPLICATING RNA MOLECULE FROM
; TITLE OF INVENTION: HEPATITIS C VIRUS
; FILE REFERENCE: 13/083
; CURRENT APPLICATION NUMBER: US/10/789,355
; CURRENT FILING DATE: 2004-02-27
; PRIOR APPLICATION NUMBER: US/10/029,907
; PRIOR FILING DATE: 2001-12-21
; PRIOR APPLICATION NUMBER: 60/257,857
; PRIOR FILING DATE: 2000-12-22
; NUMBER OF SEQ ID NOS: 25
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 4
; LENGTH: 8643
; TYPE: DNA
; ORGANISM: HCV
; FEATURE:
; NAME/KEY: CDS
; LOCATION: (1802)...(8407)
US-10-789-355-4
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Query Match 99.3%; Score 8584.7; DB 1; Length 8643;

Best Local Similarity 99.6%; Pred No. 0;

Matches 8614; Conservative 0; Mismatches 28; Indels 5; Gaps 1;

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Db 62 CTTACGCGAAGAGCGTTAGCCATGGCGTTAGTAGTGCTGTCGAGCCTCCAGGACC 121  
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Qy 6242 CGCCCGGATTAACACCTTCTAGAGTCTTGGAAAGGACCCGGAATACGTCCTCTCA 6301  
Db 6242 CGCCCGGATTAACACCTTCTAGAGTCTTGGAAAGGACCCGGAATACGTCCTCTCA 6301  
Qy 6302 GTGTGACACGCGGTGTCATTCGCGCTCCAAAGGCCCTTCGATACCACTCCAGGAG 6361  
Db 6302 GTGTGACACGCGGTGTCATTCGCGCTCCAAAGGCCCTTCGATACCACTCCAGGAG 6361  
Qy 6362 AAGAGGAGGTTGCTCTGTCAAGATCTACCGTGTCTTCTGCTTGGCGGAGCTCCCA 6421  
Db 6362 AAGAGGAGGTTGCTCTGTCAAGATCTACCGTGTCTTCTGCTTGGCGGAGCTCCCA 6421  
Qy 6422 AAGACCTTTCGAGCTCGAAATTCGTCGCGCTCGAGACGCGCAACCGCTCTCTCT 6481  
Db 6422 AAGACCTTTCGAGCTCGAAATTCGTCGCGCTCGAGACGCGCAACCGCTCTCTCTCT 6481  
Qy 6482 GACCAAGCCTTCGAGCAGCGGAGTCCGAGTTCGAGTTCGTAATCTCTCTCAATGCC 6541  
Db 6482 GACCAAGCCTTCGAGCAGCGGAGTCCGAGTTCGAGTTCGTAATCTCTCTCAATGCC 6541  
Qy 6542 CCCCTTGAGGGGAGCCCGGGGATCCGATCTCAGCGAGCGGTCTTGTCTACCGTAGC 6601  
Db 6542 CCCCTTGAGGGGAGCCCGGGGATCCGATCTCAGCGAGCGGTCTTGTCTACCGTAGC 6601



QY	6602	GAGGAGCTAGTGAGGACGTCGTCTGCTCGATCGATCTACATGGAAGCGCCCTG	6661
DB	6602	GAGGAGCTAGTGAGGACGTCGTCTGCTCGATCGATCTACATGGAAGCGCCCTG	6661
QY	6662	ATCAGGCCATCGCTCGGAGGAAACCAAGCTGCCATCAATGCACTGAGCAACTCTTTG	6721
DB	6662	ATCAGGCCATCGCTCGGAGGAAACCAAGCTGCCATCAATGCACTGAGCAACTCTTTG	6721
QY	6722	CTCGCTACACAACTTTGGTCTATGCTACAACTCTCGAGCGCAAGCCTCGGCGAGAAG	6781
DB	6722	CTCGCTACACAACTTTGGTCTATGCTACAACTCTCGAGCGCAAGCCTCGGCGAGAAG	6781
QY	6782	AAGGTCACTTTGACAGACTGCAGGCTCTGAGCAACACTACCGGAGCGTCTCAAGGAG	6841
DB	6782	AAGGTCACTTTGACAGACTGCAGGCTCTGAGCAACACTACCGGAGCGTCTCAAGGAG	6841
QY	6842	ATGAAGCGAAGGCGTCCACAGTTTAAGGCTAACTTCTATCCGTGGAAGGAGCTGTAAG	6901
DB	6842	ATGAAGCGAAGGCGTCCACAGTTTAAGGCTAACTTCTATCCGTGGAAGGAGCTGTAAG	6901
QY	6902	CTGAGCGCCCACTTTGCGCCAGATCTAAATTTGGCTATGGGCAAGAGCGTCCGGAAC	6961
DB	6902	CTGAGCGCCCACTTTGCGCCAGATCTAAATTTGGCTATGGGCAAGAGCGTCCGGAAC	6961
QY	6962	CTATCCAGCAAGCGCTTAACCACTCCGCTCGGTGGAAGGACTTGTCTGGAAGACACT	7021
DB	6962	CTATCCAGCAAGCGCTTAACCACTCCGCTCGGTGGAAGGACTTGTCTGGAAGACACT	7021
QY	7022	GAGACACCAATTGACACCAACCATCATGGCAAAAAAATGAGGTTTCTCGCTCCAAACAGAG	7081
DB	7022	GAGACACCAATTGACACCAACCATCATGGCAAAAAAATGAGGTTTCTCGCTCCAAACAGAG	7081
QY	7082	AAGGGGGCGCAAGCAGCTCGCTTATCGTATTTCCAGATTTGGGGTCTGCTGTGC	7141
DB	7082	AAGGGGGCGCAAGCAGCTCGCTTATCGTATTTCCAGATTTGGGGTCTGCTGTGC	7141
QY	7142	GAGAAATGGCCCTTTAGCATGTGGTCTCCACCTCCCTCAGGCGGTGATGGGCTCTTCA	7201
DB	7142	GAGAAATGGCCCTTTAGCATGTGGTCTCCACCTCCCTCAGGCGGTGATGGGCTCTTCA	7201
QY	7202	TACGGATTCCAAATCTCTCTGGAAGCGGCTCGATTCCTGTTGAATGCTTGGAAAGCG	7261
DB	7202	TACGGATTCCAAATCTCTCTGGAAGCGGCTCGATTCCTGTTGAATGCTTGGAAAGCG	7261
QY	7262	AAGAAATGCCCTATGGGCTTCGATATGACACCGGCTGATTCCTGCTCAACGGTCACTGAG	7321
DB	7262	AAGAAATGCCCTATGGGCTTCGATATGACACCGGCTGATTCCTGCTCAACGGTCACTGAG	7321
QY	7322	AATGACATCCGCTTGGAGGCTCAATCTACCAATGTTGTGACTTGGCCCGCGAAGCCAGA	7381
DB	7322	AATGACATCCGCTTGGAGGCTCAATCTACCAATGTTGTGACTTGGCCCGCGAAGCCAGA	7381
QY	7382	CAGGCCATAGGTCGCTCACAGAGCGGCTTTACATCGGGGCGCCCTGACTAATTTCTAAA	7441
DB	7382	CAGGCCATAGGTCGCTCACAGAGCGGCTTTACATCGGGGCGCCCTGACTAATTTCTAAA	7441
QY	7442	GGGAGAACTCGGGCTATCGCGGTGCGCGAGCGGTGACTGACAGCAGCTCGGGT	7501
DB	7442	GGGAGAACTCGGGCTATCGCGGTGCGCGAGCGGTGACTGACAGCAGCTCGGGT	7501
QY	7502	AATACCTTCACATGTTACTTGAAGCGCTCGGCTGTCCAGCTGCGAAGCTCCAGGAC	7561
DB	7502	AATACCTTCACATGTTACTTGAAGCGCTCGGCTGTCCAGCTGCGAAGCTCCAGGAC	7561
QY	7562	TGACAGATGCTCGTATGCGGAGAGCACTTGTCTGTTATCTGTGAAAGCGGGGACCCAA	7621
DB	7562	TGACAGATGCTCGTATGCGGAGAGCACTTGTCTGTTATCTGTGAAAGCGGGGACCCAA	7621
QY	7622	GAGGACGAGGAGCTTACGGGCTTACGAGGCTATGACTAGATCTGTGCCCCCT	7681
DB	7622	GAGGACGAGGAGCTTACGGGCTTACGAGGCTATGACTAGATCTGTGCCCCCT	7681
QY	7682	GGGAGCCCGCAACCAAGATAACGACTTGGAGTTGATAACATCATGCTCCTCCAATGTG	7741

DB	7682	GGGAGCCCGCCAAACCAAGATAACGACTTGGAGTTGATAAATCATGCTCCTCCAATGTG	7741
QY	7742	TGAGTCCGCGCAGATGCACTCGCAAAAGGGTGTACTATCTCACCGTGACCCACACACC	7801
DB	7742	TGAGTCCGCGCAGATGCACTCGCAAAAGGGTGTACTATCTCACCGTGACCCACACACC	7801
QY	7802	CCCCCTTGGCGGGCTGCGTGGGAGAGCAGCTAGACACACTCCAGTCAATTCCTGGCTAGGC	7861
DB	7802	CCCCCTTGGCGGGCTGCGTGGGAGAGCAGCTAGACACACTCCAGTCAATTCCTGGCTAGGC	7861
QY	7862	AACATCATGATATGCGGCCCACTTGTGGGCAAGGATGATCCTGATGACTCATTTCTTC	7921
DB	7862	AACATCATGATATGCGGCCCACTTGTGGGCAAGGATGATCCTGATGACTCATTTCTTC	7921
QY	7922	TCCATCCTTCTAGCTCAGGAACAACCTTGAAGAAAGCCCTAGATTGTGATGACTCAAGGGCC	7981
DB	7922	TCCATCCTTCTAGCTCAGGAACAACCTTGAAGAAAGCCCTAGATTGTGATGACTCAAGGGCC	7981
QY	7982	TGTTACTCCTATTGAGCCACTTGCACCTTACCTCAGATCATTTCAACGACTCCACGGCTTAGC	8041
DB	7982	TGTTACTCCTATTGAGCCACTTGCACCTTACCTCAGATCATTTCAACGACTCCACGGCTTAGC	8041
QY	8042	GCATTTTCACTCCATAGTTACTCTCCAGGTGAGATCAATAGGGTGGCTTCATGCTCAGG	8101
DB	8042	GCATTTTCACTCCATAGTTACTCTCCAGGTGAGATCAATAGGGTGGCTTCATGCTCAGG	8101
QY	8102	AACTTGGGGTACCGCCCTTGGAGTCTCGAGTCTCGGACATCGGGCCAGAGTGTCCGCGTAGG	8161
DB	8102	AACTTGGGGTACCGCCCTTGGAGTCTCGAGTCTCGGACATCGGGCCAGAGTGTCCGCGTAGG	8161
QY	8162	CTACTCTCCAGGGGGAGGGCTGCCACTTGTGGCAAGTACCTCTTCAACTGGGCAAGTA	8221
DB	8162	CTACTCTCCAGGGGGAGGGCTGCCACTTGTGGCAAGTACCTCTTCAACTGGGCAAGTA	8221
QY	8222	AGGACCAAGCTCAAACTCACTCCCAATCCCGGCTCGCTCCAGTTGGATTATCCAGCTGG	8281
DB	8222	AGGACCAAGCTCAAACTCACTCCCAATCCCGGCTCGCTCCAGTTGGATTATCCAGCTGG	8281
QY	8282	TTGCTTGTCTGTTTACAGCGGGGAGACATATATACAGCTGTCTCGTCCCGACCCCGC	8341
DB	8282	TTGCTTGTCTGTTTACAGCGGGGAGACATATATACAGCTGTCTCGTCCCGACCCCGC	8341
QY	8342	TGCTTCACTGCTGCTTACTCTTCTTCTGTAGGGGTAGGCATCTATCTACTCCCCAAC	8401
DB	8342	TGCTTCACTGCTGCTTACTCTTCTTCTGTAGGGGTAGGCATCTATCTACTCCCCAAC	8401
QY	8402	CGATGAAACGGGAGCTTAAACACTCCAGGCAATAGGCAATCCCTGTTTTTCCCTTTTTT	8461
DB	8402	CGATGAAACGGGAGCTTAAACACTCCAGGCAATAGGCAATCCCTGTTTTTCCCTTTTTT	8461
QY	8462	CCCTTT	8521
DB	8462	TT	8516
QY	8522	TCCCTTTTTTTTTTCTTTTCTTTCTTTTGGTGGCTCCATCTTTAGCCCTAGTCACGGCTA	8581
DB	8517	TTCCCAATTTTTTCTTTTCTTTTCTTTTGGTGGCTCCATCTTTAGCCCTAGTCACGGCTA	8576
QY	8582	GCTGTGAAAGGTCCTGAGCGCTTGACTGACAGAGTGTGATGCTGAGGCTCTCTGAG	8641
DB	8577	GCTGTGAAAGGTCCTGAGCGCTTGACTGACAGAGTGTGATGCTGAGGCTCTCTGAG	8636
QY	8642	ATCAAGT 8648	
DB	8637	ATCAAGT 8643	

## RESULT 4

US-10-789-355-7  
; Sequence 7, Application US/10789355  
; GENERAL INFORMATION:  
; APPLICANT: BOEHRINGER INGELHEIM (CANADA) LTD.

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; TITLE OF INVENTION: SELF REPLICATING RNA MOLECULE FROM
; TITLE OF INVENTION: HEPATITIS C VIRUS
; FILE REFERENCE: 13/083
; CURRENT APPLICATION NUMBER: US/10/789,355
; PRIOR FILING DATE: 2004-02-27
; PRIOR APPLICATION NUMBER: US/10/029,907
; PRIOR FILING DATE: 2001-12-21
; PRIOR APPLICATION NUMBER: 60/257,857
; PRIOR FILING DATE: 2000-12-22
; NUMBER OF SEQ ID NOS: 25
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 7
; LENGTH: 8638
; TYPE: DNA
; ORGANISM: HCV
; FEATURE:
; NAME/KEY: CDS
; LOCATION: (1802)...(8407)
US-10-789-355-7

Query Match
Best Local Similarity 99.2%; Score 8578.2; DB 1; Length 8638;
Matches 8610; Conservative 0; Mismatches 28; Indels 10; Gaps 1;

QY 1 GCACGCCCCCGATTGGGGGCGACACTCCACATAGATCACTCCCTGTGAGGAATCTACTG 60
DB 1 GCACGCCCCCGATTGGGGGCGACACTCCACATAGATCACTCCCTGTGAGGAATCTACTG 60
QY 61 TCTTCACGAGAAAGCGTTAGCCATGGCGTTAGTATGATGTGCTGAGCCTCCAGGAC 120
DB 61 TCTTCACGAGAAAGCGTTAGCCATGGCGTTAGTATGATGTGCTGAGCCTCCAGGAC 120
QY 121 CCCCCCTCCGGAGAGCCATAGTGTCTCGGAACCGGTGAGTACACCGGAATTCGCCAG 180
DB 121 CCCCCCTCCGGAGAGCCATAGTGTCTCGGAACCGGTGAGTACACCGGAATTCGCCAG 180
QY 181 GACGACCGGTCTCTTCTTGATCAACCCGCTCAATCCCTGGAGATTTGGCGGTGCCCCC 240
DB 181 GACGACCGGTCTCTTCTTGATCAACCCGCTCAATCCCTGGAGATTTGGCGGTGCCCCC 240
QY 241 GCAGACTGTACCGAGTAGTGTGGGTGCGAAAGCGCTTGTGGTATCTGCTGTATAG 300
DB 241 GCAGACTGTACCGAGTAGTGTGGGTGCGAAAGCGCTTGTGGTATCTGCTGTATAG 300
QY 301 GTCTTGGAGTGCCTCCGGAGGTCTGTAGACCGGTGACCATGAGCAGCAATCTTAAC 360
DB 301 GTCTTGGAGTGCCTCCGGAGGTCTGTAGACCGGTGACCATGAGCAGCAATCTTAAC 360
QY 361 CTCAGAGAAAACCAAGGGCGGCCATGATTGAACAAGATGGAATGCACGAGTTCTC 420
DB 361 CTCAGAGAAAACCAAGGGCGGCCATGATTGAACAAGATGGAATGCACGAGTTCTC 420
QY 421 CGGCGCTTGGGTGGAGAGCTATTTGGGTATGACTGGGACAAACAGACATCGGCTGCT 480
DB 421 CGGCGCTTGGGTGGAGAGCTATTTGGGTATGACTGGGACAAACAGACATCGGCTGCT 480
QY 481 CTGATGCGCGGTCTCCGGCTGTGACGCGAGGGGCGCCGGTCTTTTGTCAAGACCG 540
DB 481 CTGATGCGCGGTCTCCGGCTGTGACGCGAGGGGCGCCGGTCTTTTGTCAAGACCG 540
QY 541 ACCTGTCCGTGTCCTGAATGAATGAACTGACGAGGAGGCGCGGCTATCGTGGCTGCCA 600
DB 541 ACCTGTCCGTGTCCTGAATGAATGAACTGACGAGGAGGCGCGGCTATCGTGGCTGCCA 600
QY 601 CGACGGCGTTCCTTGGCGAGCTGTGCTCGACGTTGTCATGAAGCGGGAAGGACTGGC 660
DB 601 CGACGGCGTTCCTTGGCGAGCTGTGCTCGACGTTGTCATGAAGCGGGAAGGACTGGC 660
QY 661 TGTATTGGGGAAGTCCGGGCGAGGATCTCTGTCTCATCTCACTTGTCTCTGCGGAGA 720
DB 661 TGTATTGGGGAAGTCCGGGCGAGGATCTCTGTCTCATCTCACTTGTCTCTGCGGAGA 720
QY 721 AAGTATCCATCATGGCTGATGCAATGCGGGGCTGCAATGCTTGTATCGGCTACCTGCC 780
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721 AAGTATCCATCATGGCTGATGCAATGCGCGGCTGCATACGCTTGCATCGGCTACTCGC 780
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781 CATTGACACCAAGCGAAACATCGCATCGAGCGAGCAGTACTCGGATGGAAGCGGTC 840
841 TTGTCGATCAGGATGATCTGGACGAAGAGCATCAGGGGCTCGCGCAGCCGAATCTTTCG 900
841 TTGTCGATCAGGATGATCTGGACGAAGAGCATCAGGGGCTCGCGCAGCCGAATCTTTCG 900
901 CCAGGCTCAAGCGCGCATCGCCGACGCGAGGATCTCGTGTGACCCATGCGGATGCT 960
901 CCAGGCTCAAGCGCGCATCGCCGACGCGAGGATCTCGTGTGACCCATGCGGATGCT 960
961 GCTTCCGGAATATCATGTGGAATAATGCGCGCTTTCTTGGATTCATCGACTGTGCGCGC 1020
961 GCTTCCGGAATATCATGTGGAATAATGCGCGCTTTCTTGGATTCATCGACTGTGCGCGC 1020
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1021 TGGGTGTGCGGACCGCTTATCAGGACATAGCGTTGGCTACCGGTGATATTGCTGAAGAGC 1080
1081 TTGGCGGGAATGGGCTGACCGCTTCTCTGCTTTACGGTATCGCGCTCCCGATTCGC 1140
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1381 TAGGGGTCTTTCCCTCTCGCAAGGAATGCAAGGTCTGTTGAATGTCTGTAAGGAAGC 1440
1381 TAGGGGTCTTTCCCTCTCGCAAGGAATGCAAGGTCTGTTGAATGTCTGTAAGGAAGC 1440
1441 AGTTCTCTGGAAGCTTCTTGAAGCAACACAGCTCTGTAGCGACCTTTGAGGCGAGCG 1500
1441 AGTTCTCTGGAAGCTTCTTGAAGCAACACAGCTCTGTAGCGACCTTTGAGGCGAGCG 1500
1501 GAAACCCCGCCTGCGACAGGTGCTCTGCGGCCAAAGACACGCTGTATAAGATACACC 1560
1501 GAAACCCCGCCTGCGGACAGGTGCTCTGCGGCCAAAGACACGCTGTATAAGATACACC 1560
1561 TCAAGAGCGGCAACACCCAGTGCACCTTGTGAGTTGGATGAGTTGTGGAAGAGTCAA 1620
1561 TCAAGAGCGGCAACACCCAGTGCACCTTGTGAGTTGGATGAGTTGTGGAAGAGTCAA 1620
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1621 ATGGCTCTCTCAAGGATTTCAAACAGGGGCTGAGGATGCCAGAGGTACCCCATTCG 1680
1681 TATGGATCTGATCTGGGCTCTCGGTGACATGCTTTACATGTTGTTTAGTCAGAGTTAA 1740
1681 TATGGATCTGATCTGGGCTCTCGGTGACATGCTTTACATGTTGTTTAGTCAGAGTTAA 1740
1741 AAACGCTTAGGCGCCCGCAACACCGGGACGTGGTTCCTTTGAAAAACAAGATATAC 1800
1741 AAACGCTTAGGCGCCCGCAACACCGGGACGTGGTTCCTTTGAAAAACAAGATATAC 1800
1801 CATGACCGGAGATGCGGAGCATCGTGGAGGCGCGGTTTTCGTAGGTTCTGATCTCTT 1860
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Db 1801 CATGGACGGGAGATGGCAGCATCGTGGGAGCGCGGTTTTTCGTAGGTCTGATACTCTT 1860  
QY 1861 GACCTTTGTACCGGACTATTAAGCTGTTCCTCGCTAGGCTCATATGTTGTTTACAAATATTT 1920  
Db 1861 GACCTTTGTACCGGACTATTAAGCTGTTCCTCGCTAGGCTCATATGTTGTTTACAAATATTT 1920  
QY 1921 TATCACAGGGCCGAGGACACATTGCAAGTGTGGATCCCCCCCCCTCAACGTTTCGGGGGGG 1980  
Db 1921 TATCACAGGGCCGAGGACACATTGCAAGTGTGGATCCCCCCCCCTCAACGTTTCGGGGGGG 1980  
QY 1981 CCGCGATGCGCGTCATCCTCTCACTGTCGCGATCCACCCAGAGCTAAATCTTTACCATCAC 2040  
Db 1981 CCGCGATGCGCGTCATCCTCTCACTGTCGCGATCCACCCAGAGCTAAATCTTTACCATCAC 2040  
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Db 2041 CAAAAATCTTGCTCGGCATCTCGGTCCACTCATGTTGCTCCAGGCTGGTATAACCAAAGT 2100  
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Db 2101 GCCGTACTTCTGCGGCACACCGGCTCATTCGTGATGCATGCTGTTGCGGAAGGTTGC 2160  
QY 2161 TGGGGGTCAATTAATCTCAAAATGGCTCTCATGAAGTTGGCCGCTACGACAGGTACGTACGT 2220  
Db 2161 TGGGGGTCAATTAATCTCAAAATGGCTCTCATGAAGTTGGCCGCTACGACAGGTACGTACGT 2220  
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Db 2281 GGCAGTTGAGCCGCTCTCTGATATGGAGCAAGGTTATCACCTTGGGGGGCAGA 2340  
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Db 2341 CACCGGGCGTGTGGGACATCATTTTGGCCCTGCCCGTCTCCCGCGCAGAGGGGAGGA 2400  
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QY 2821 GGGAGCCTACTCTCCCGGCGGCTCTCTACTTGAAGGGCTCTTCGGGGCGGTCCACT 2880  
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4081 CGCCCATTTCTTCTCCAGACTAAGCAGGAGGAGAGACAATTTCCCTTACTCTGGTAGCAT 4140  
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Db  
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|||||  
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Qy	6361	GAAGAGACGGTGTCTCTGTCAGAACTACCGTGTCTTTCGCTTGGCGGAGCTCGCCAC	6420
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Qy	6421	AAAGACCTTCGGAGCTCCCAATCGTCGGCGCTCGACAGCGGACGCAACGCGCTCTCC	6480
Db	6421		6480
Qy	6481	TGACAGCCCTCCGACGACGCGGATCCGATCCGAGCTTGAGTCTGTAATCTCTCCATGCC	6540
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Qy	6721	GCTCCGTACACAACTTGGTCTATGTCTAACAATCTCGAGCGCAAGCCTCGCGGAGAA	6780
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Qy	6961	CCTATCCAGCAAGCCGTTAACACATCCGCTCCGCTGGAAGGACTTGTGGAAGCAC	7020
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Db	7021		7080
Qy	7081	GAAGGGGGCGCAAGCCAGCTCGCTTATCGTATCCCAAGATTTGGGGTTGCTGTGTG	7140
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Qy	7141	CGAGAAATGGCCCTTTACGATGTTGTTCTCCACCTCCCTCAGGCCGTGATGGCTCTTC	7200
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Qy	7201	ATACGGATTCCTCTCTGACACGCGGTGAGTCTCTGTTGAATGCTTGGAAAGC	7260
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Qy	7261	GAAGAAATGCCCCTATGGCTTCGATATGACACCCGCTGTTTGGACTCAACGGTCACTGA	7320
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Qy	7381	ACAGGCCATAAGGTGCTCTACAGAGCGGCTTTACATCGGGGGCCCCCTGACTAATTTCTAA	7440
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Qy	7561	CTGCGAGATGCTGTTATGCGGAGACGACTTGTCTGTATCTGTGAAGCGCGGGACCCA	7620
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Qy	7621	AGAGGACGAGCGAGCTACGGGCTTTCACGAGGCTATGACTAGATATCTTGCCTCCCTCC	7680
Db	7621		7680
Qy	7681	TGGGACCCCGCCAAACCAAGATACGACTTGGAGTTGATPAACATCATGCTCTCTCAATGT	7740
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Qy	7741	GTGCTGCGGACGATGATCTGGGAAAGGGTGTACTATCTCACCGGTGACCCGACCCAC	7800
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Qy	7921	CTCCATCTCTTCTAGCTCAGAAACACTTGAAGCCCTAGATTTGTCAGATCTACGGGC	7980
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Qy	7981	CTGTTACTCCATTGAGCCACTTGAACCTCAGATCACTCAACGACTCCACGGCTTAG	8040
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Qy	8101	GAACTTGGGTACCCGCTTGGAGACATCGGGCCAGAGTGTCCGCGCTAG	8160
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Qy	8221	AAGGACCAAGCTCAAACTCACTCCGCTGCGTCCAGTTGAGTTTATCCAGCTG	8280
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Qy	8281	GTTTCTGCTGTTACAGCGGGGAGACATATATCAAGCTGTCTGCTGCGCCGACCCCG	8340
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Qy	8341	CTGGTTCACTGCTGCTACTCTTCTTCTGTTAGGGTAGGCTATCTACTCTCCCAA	8400
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Db 8631 GATCAAGT 8638

RESULT 5
US-10-789-355-25
; Sequence 25, Application US/10789355
; GENERAL INFORMATION:
; APPLICANT: BOEHRINGER INGELHEIM (CANADA) LTD.
; TITLE OF INVENTION: SELF REPLICATING RNA MOLECULE FROM
; TITLE OF INVENTION: HEPATITIS C VIRUS
; FILE REFERENCE: 13/083
; CURRENT APPLICATION NUMBER: US/10/789,355
; PRIOR FILING DATE: 2004-02-27
; PRIOR APPLICATION NUMBER: US/10/029,907
; PRIOR FILING DATE: 2001-12-21
; PRIOR APPLICATION NUMBER: 60/257,857
; PRIOR FILING DATE: 2000-12-22
; NUMBER OF SEQ ID NOS: 25
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 25
; LENGTH: 8638
; TYPE: DNA
; ORGANISM: HCV
; FEATURE:
; NAME/KEY: CDS
; LOCATION: (1802)...(8407)
US-10-789-355-25

Query Match 99.2%; Score 8577.2; DB 1; Length 8638;
Best Local Similarity 99.6%; Pred. No. 0;
Matches 8609; Conservative 0; Mismatches 28; Indels 10; Gaps 1;

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2642 CTTTGGCGGCCAAAAGGGGCCAATCAACCCAAATGTACACCAATGTGGACAGGACCTCGTC 2701  
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2702 GGCTGGCAAGCGCCCCCGGGCGGCTTCTTTGACACCAATGACCTTGGGAGCTCGGAC 2761  
2762 CTTTACTTGGTCACGAGGACATGCCGATGTCTTCGCTGCGCGGGCGGCGACAGCAGG 2821  
2762 CTTTACTTGGTCACGAGGACATGCCGATGTCTTCGCTGCGCGGGCGGCGACAGCAGG 2821  
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2882 CTTCTGCCCCCTCGGGGACCGCTGTGGGCATCTTTTCGGGCTGCGGTGTCACCGAGGGTT 2941  
2942 GCGAAGGGGCTGAGCTTTGTACCCGTCGAGTCTATGGGAACCACTATGCGGTCCCCGGTC 3001  
2942 GCGAAGGGGCTGAGCTTTGTACCCGTCGAGTCTATGGGAACCACTATGCGGTCCCCGGTC 3001  
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3002 TTTACGGGACAACTCGTCCCCCTCGGCGGTACCGGACACATTCAGGTGCGCCATCTACAC 3061  
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3122 AAGGTGCTGTCTGAAACCGGTCGCGCGCACCTAGGTTCGCGGCGGTATATGTCT 3181  
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Db 3602 CTCGACTCAATCTGTAGCATATTACGGGGCCTTGATGTATCCGTCATACCAACTAGC 3661  
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Db 3662 GGAGAGTCTATTGTCTGTAGCAACGGACGCTCTAATGACGGCTTTACCGCGCATTTTCGAC 3721  
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